QUVA
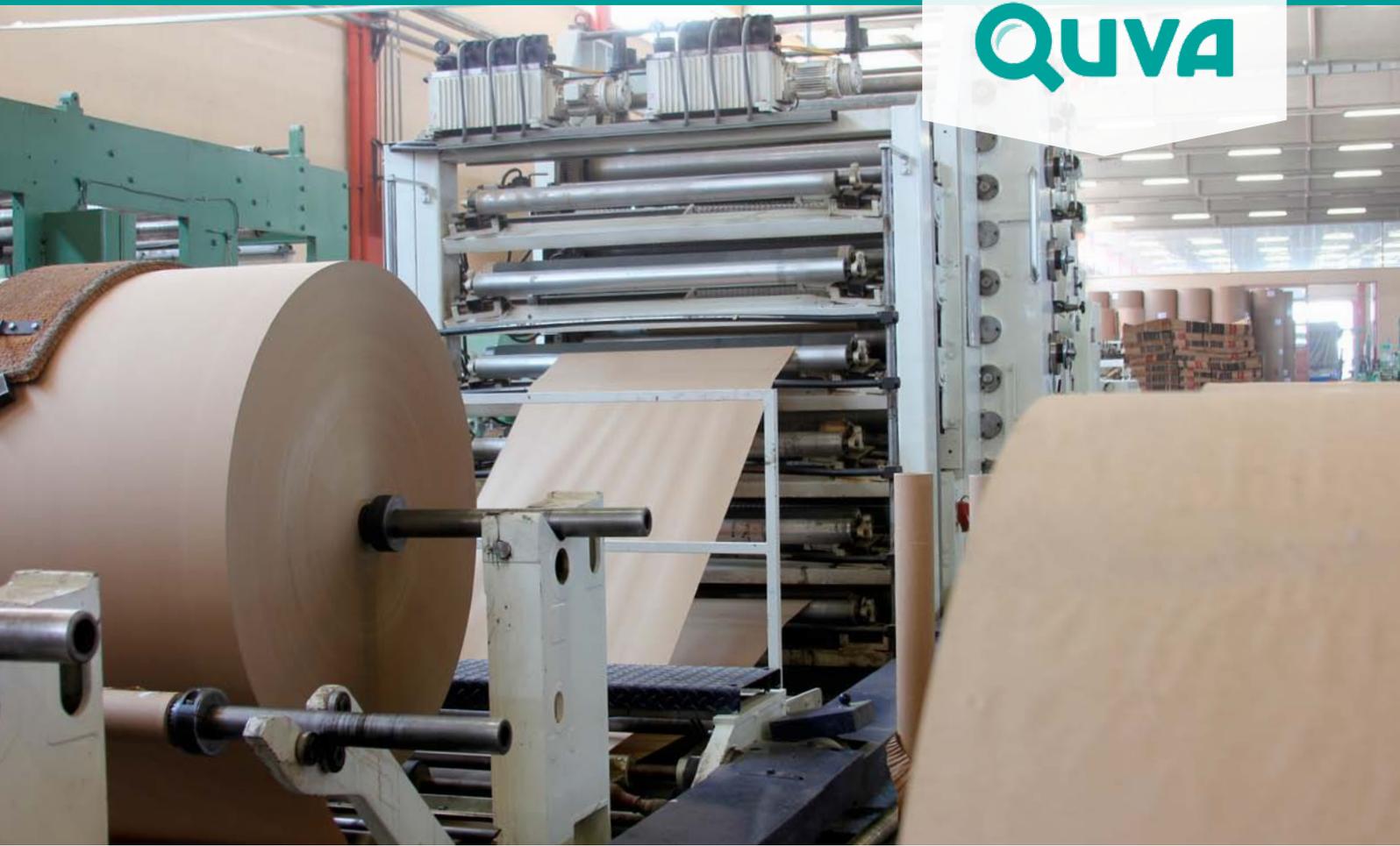
Utilizing collected data in pulp and paper industry: Case Efora Oy

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The manufacturing industry is under pressure to create cost savings and streamline their operations. New procedures, data utilization, and efficiency monitoring bring about great possibilities for the industrial sector. By utilizing agile models, the information collected from machines and devices is already creating cost savings and providing competitive advantage for companies. A pilot project was implemented at a Stora Enso cardboard factory in Imatra where they combined information from both production and maintenance to help predict any possible faults. Similar agile pilot projects can be implemented in different functions of industrial companies, such as production and quality control.

> QUVA OY HAS SOLID KNOW-HOW AND COMPETENCE TO DISCOVER THE MOST ESSENTIAL INFORMATION OUT OF A HUGE MASS OF DATA. SEAMLESS COOPERATION BETWEEN THE COMPANY'S OWN PERSONNEL AND ANALYTICS EXPERTS HAS BEEN OF ABSOLUTE IMPORTANCE IN SIMILAR PROJECTS, SAYS JARI COLLIN FROM EFORA OY.

The client could better predict their operations

The system installed at the Stora Enso cardboard factory in Imatra for pilot use is based on the mathematical analysis of large masses of data and machine learning. CIO **Jari Collin** from Efora Oy, a subsidiary of Stora Enso, says the pilot in question is the most advanced project utilizing modern machine learning the company has ever had.

The pilot is a concrete part of the intelligent maintenance strategy of Efora Oy.

– We already have a huge amount of data at our disposal. During the pilot, we analyzed the historical data

produced by service operations and maintenance. We compared this information with what happened in production before the faults occurred. This has given us a whole new understanding of machines and systems, Collin explains.

Efora is a subsidiary of Stora Enso, and they are in charge of the facilities' maintenance and production development. According to Collin, the new pilot model creates a foundation for a whole new operational model: with the help of the model, they are gradually moving towards predictive maintenance enabled by new and modern technologies which are based on real time analytics.

– To me, the Internet of Things is about being able to now combine, interpret and draw conclusions from information that resides in different systems and machines. What is essential is that with these actions we are able to monitor the machines' operations in real time, summarizes Collin.

Agile start with a pilot project

Quva Oy is a company that develops analytics solutions for production. The company's Chairman of the Board, **Olli Pasanen**, encourages companies especially in the process industry to carry out similar projects. According to Pasanen, it is important in the initial stage to know how to limit the pilot to areas, which provide actual business value.

– During the pilot it is good to focus on, for example, a part of production or machine that needs improvement. Knowledge of data-driven approach, implementation of analytics, and understanding how to utilize information that accumulates within the whole organization are matters that have been of utmost importance to our clients, summarizes Pasanen. According to Pasanen, agile experimentation produces new practices that can also be adapted to other operations within the organization. What is also good
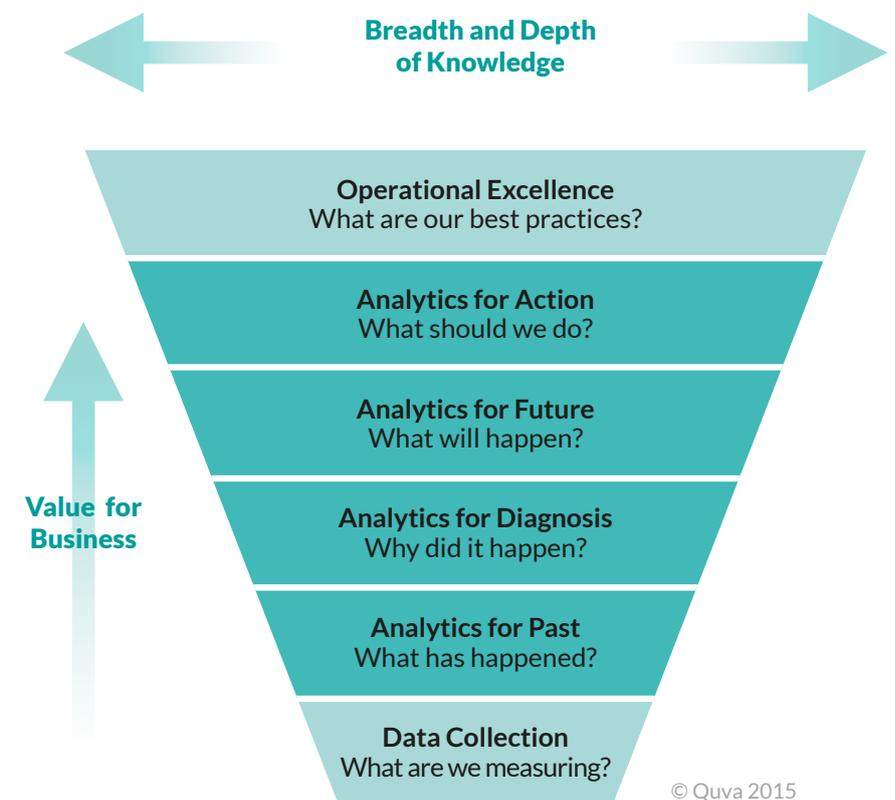
about pilots carried out in production is that the personnel learn how to improve their own performance based on the information received during the pilot.

– We can also say that analytics helps clients to understand their own operational environment better; what happens there; what will happen, and especially, what should they do. In many places, utilizing accumulated data is only in its early stages. With the knowledge gained from analytics, companies can become even better, says the CEO of Quva Oy, **Emil Ackerman**.

But for industry experts one thing is clear:

– Information gained from machines and processes will be utilized in a much greater scale in the near future. The information will also be employed much earlier and in a more integrated manner than now. This is only the beginning, reminds Ackerman.

REAL TIME UTILIZATION OF DATA THAT IS ACCUMULATED FROM PRODUCTION AND QUALITY PROVIDES A COMPETITIVE ADVANTAGE NOW AND IN THE FUTURE!

Breadth and Depth of Knowledge

Value for Business

Operational Excellence
What are our best practices?

Analytics for Action
What should we do?

Analytics for Future
What will happen?

Analytics for Diagnosis
Why did it happen?

Analytics for Past
What has happened?

Data Collection
What are we measuring?

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Steps and questions for comprehensive utilization of data to support business operations.

How to have an agile start to data utilization:

- Choose a part of your production that is in need of development.
- From the very beginning, include the views of both your own personnel, as well as analytics experts.
- Target the data collection and analytics to a critical point in your process.
- Make use of the experience of industry experts during the pilot.
- Share what you have learned with your entire organization.
- Use the data to improve business operations every day.

QUVA

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